REMARKS/ARGUMENTS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks. Claims 1-37 were pending prior to the Office Action. Claims 1-37 are canceled without prejudice or disclaimer, and claims 38-66 are added through this Reply. Therefore, claims 38-66 are pending.

The new claims correspond to subject-matter of the claims as filed by letter dated September 25, 2006 and subject-matter disclosed in the application as filed. See e.g. page 1, lines 33; page 2, line 23; page 5, lines 5-6, 21-25; page 6, lines 14-16; page 10, lines 19-22; page 13, lines 9-11; page 20, lines 19-23 and page 24, lines 24-32. No new matter has been added.

In the Office Action, claims 1-37 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Karlsson (U.S. Patent No. 5,499,386). These new claims overcomes all rejections.

Regarding independent claim 38, Karlsson discloses a method of assigning a handover signal strength threshold (*column 9, lines 42-50*) to a cell (*C1-C10, Fig. 1*) in a cellular communications system (*Fig. 1, column 4, lines 46-48*). In the method, Karlsson classifies cells of a communications system into one of multiple preference categories. For a cell, Karlsson determines to which preference handover category the cell belongs to. *See column 3, lines 10-13, 31-34.* Based on the cell's category, the system assigns a handover signal strength threshold. *See column 9, lines 42-50.*

However, Karlsson fails to disclose that a first handover-related class is associated with a first handover signal strength threshold that is different from a second handover signal strength threshold associated to a second, different handover-related class as recited in claim 38. Karlsson does further not disclose that the assigning step comprises assigning, to the cell, the handover signal strength threshold associated with the determined handover-related class also as recited.

In a clear contrast, one and the same handover signal strength threshold is used for all cells according to Karlsson. This is evident, for instance, from column 3, lines 13-17 stating that signal strengths of the radio signal providing communication between the mobile station and the base station serving each of the associated cells (having different categories of preferences according to column 3, lines 10-13) within the system is measured and compared to **a preselected** threshold value. Thus, one and the same preselected threshold value is used even though Karlsson disclosed that the cells are of different preference categories.

Furthermore, in column 4, lines 2-6, it is evident that even though a serving cell can be selected among the currently serving cell and neighboring cells only one threshold value (minimum acceptable value) is used.

Column 8, lines 44-52 discusses handover to a cell of larger radio coverage area as compared to the current cell and to a cell of smaller radio coverage area, i.e. belonging to different cell categories. However, the same

threshold is used in the signal strength comparison for both these cells even though they are classified into different handover-related classes.

The Examiner refers to column 9, lines 42-59 of Karlsson and indicates that each category of cells (handover-related class) is associated with a unique parameter in the form of hysteresis value to be applied to the signal strength threshold. Applicants respectfully disagree. This section of Karlsson merely states that each cell (regardless of category) has five different assigned parameters: i) a signal strength threshold, ii) a hysteresis value to be used together with the threshold, iii) a list of neighboring cells, iv) a category/classification identifier for each neighboring cell, and v) a hysteresis value for each neighboring cells.

This section is totally silent whether the thresholds and hysteresis values are the same or different for cells in the system. Furthermore, this section does not even hint that class-specific thresholds or hysteresis values should be used for different cell categories.

Reading this section in isolation without regard to the remaining passages of Karlsson, the reader could therefore assume one of two possibilities: i) all cells in the system have the same assigned thresholds and hysteresis values or ii) each cell has an independently assigned threshold and hysteresis value. There is no discussion whatsoever in this section that thresholds and hysteresis values should be category-specific.

However, when reading the relevant section in the light of the remaining disclosure of Karlsson, it is evident for the person skilled in the art that the

same threshold values are used throughout the whole system according to the discussion above with reference to sections column 3, lines 13-17; column 4, lines 2-6; column 8, lines 44-52 of Karlsson.

Karlsson also continues by discussing neighboring cell information in column 11, lines 2-22. This information comprises the following five parameters: i) control channel frequencies for the neighboring cells, ii) category/classification identifier for the neighboring cells, iii) a signal strength threshold for each preferred category cell, where the threshold is equal to a fixed signal strength threshold and a hysteresis value, iv) for each control channel, a signal strength threshold that is equal to the fixed signal strength threshold subtracted by the hysteresis value, and iv) a hysteresis value for each neighboring cell of equally preferred and non-preferred category.

In this case, the same hysteresis value is used for the preferred category of cells as remaining cells belonging to either the equally preferred or the non-preferred category. This is evident as the same hysteresis value is used for determining the thresholds for parameter iii) limited to preferred category cells as is used for determining the parameter iv) that applies to all categories of cells and is not limited to the preferred category.

Furthermore, there is no indication whatsoever that parameter v) should be category specific. In clear contrast, it merely states that each cell in the equally preferred and non-preferred category has a hysteresis value. This section therefore does not disclose that same hysteresis values are used for cells belonging to the same category. The section does also not disclose that the

hysteresis value from one category is different from the value of another category.

Thus, Karlsson is totally silent and does not even hint to classifying cells into different cell classes based on their relative radio coverage characteristics and then assign class-specific handover signal strength thresholds to these classes so that all cells of a given class has the same threshold, which is further different from the threshold of a cell belonging to another class.

In clear contrast, Karlsson guides the person skilled in the art in a fundamentally different direction by stating throughout the document that the same signal strength threshold is used for different cells even if they belong to different categories/classes.

Regarding independent claim 39, Karlsson discloses a method of triggering a handover-related procedure for user equipment (*M1-M9, Fig. 1*) in a cellular communication system (*column 3, lines 6-10*). In the method, the cells of a communications system are classified based on one of multiple preference categories. *See column 3, lines 10-13, 31-34.* The signal strength of the radio signals providing communication between the mobile station and the base station serving each of the associated cells within the system is measured and compared to a preselected threshold value. Whether or not to handoff the mobile to a base station serving an associated cell is determined based upon whether the signal strength of the radio signal therefrom is greater than the threshold value and on the preference assigned to the associated cell. *See column 3, lines 13-20.*

However, as thoroughly discussed above, Karlsson does not disclose assigning a first handover signal strength threshold to a first handover-related class and assigning a second, different threshold to a second handover-related class. Karlsson does further not disclose the usage of class-specific thresholds in the generation of the handover triggering command.

Regarding independent claim 40, Karlsson discloses that the signal strength of the radio signals providing communication between the mobile station and the base station serving each of the associated cells within the system is measured and compared to a preselected threshold value. *See Fig. 1; column 3, lines 13-17.* Karlsson also discloses data regarding handover signal strength threshold for the cell being assigned. *See column 9, lines 42-51.*

However, Karlsson does not disclose that the handover signal strength threshold is determined based on the radio coverage characteristics of the cell as discussed above. In addition, Karlsson further does not disclose the modification of a list of connected cells based on the measured signal quality and the handover signal strength threshold.

In the office action, the learned Examiner refers to two passages in column 8. However, these passages merely states that if a new cell class/category is defined for a cellular radio system, the software of the relevant system nodes, such as base stations, must be updated.

The discussion above in relation to new claims 38-40 also applies mutatis mutandis to the independent claims 49, 52, 55, and 62. Claims 41-48,

50-51, 53-54, 56-61, and 63-66 depend from these independent claims and recite further distinguishing features.

In summary, the Karlsson does not at all disclose or guide the skilled person towards usage of class-specific signal strength thresholds for use in connection with handover-related procedures. In clear contrast, Karlsson guides the skilled person in a totally different direction by disclosing the usage of the same threshold value for cells having different classifications.

In clear contrast, Karlsson discloses the traditional way of performing handovers using a single signal strength threshold for all cells in the system complemented with a hysteresis for avoiding frequent handover switches back and forth between two cells. However, in Karlsson this traditional procedure is complemented with the usage of different cell category preferences. Such an approach is, according to Karlsson, taken as it is favorable to first test whether handover to smaller area cells is possible, then test whether handover to equal area cells is possible and finally if both of these fail, perform handover to larger area cells.

Therefore, one of many non-limiting objectives of the present embodiments to adjust the particular signal strength threshold values to the particular radio coverage areas to thereby effectively adjust the relative sizes of the handover areas to best reflect how the radio characteristics change over distance for the different cell classes cannot be solved by Karlsson or any obvious modification thereof.

As shown by the above analysis, the reference does not render the present claims unpatentable. There is no disclosure of the claimed subject matter, nor is the claimed subject matter rendered obvious. Applicants respectfully request that the rejections be withdrawn and the pending claims be allowed.

All objections and rejections raised in the Office Action having been addressed, it is respectfully submitted that the present application is in condition for allowance. Should there be any outstanding matters that need to be resolved, the Examiner is respectfully requested to contact Hyung Sohn (Reg. No. 44,346), to conduct an interview in an effort to expedite prosecution in connection with the present application.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicants respectfully petition for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee is attached hereto.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Respectfully submitted,

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